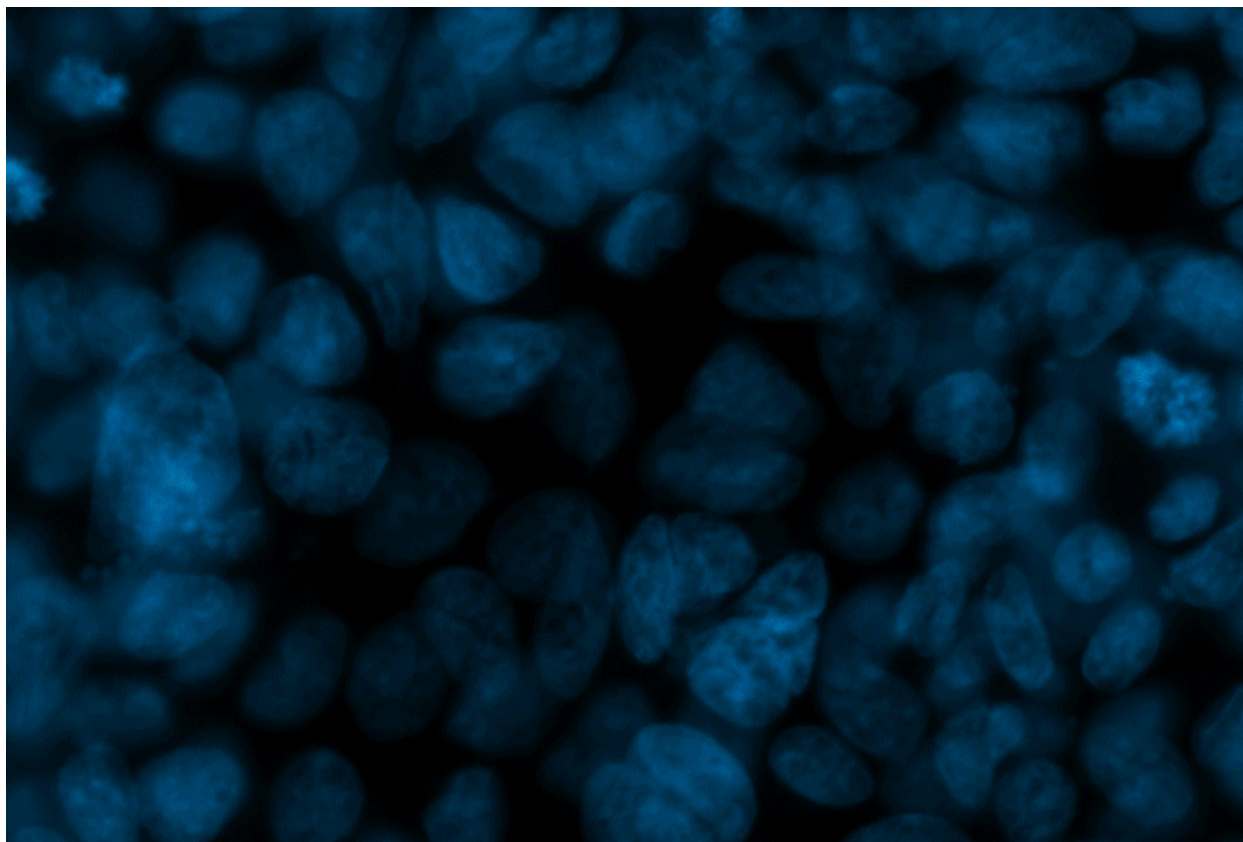




## Picture of the Week: Fighting the flu, one cell at a time

August 1, 2016



### Fighting the flu, one cell at a time

Fluorescent microscopy images taken at Los Alamos National Laboratory dramatize the battleground where the ion channel M2 protein of influenza virus A, labeled with a green fluorescent antibody, attacks the cellular defense protein Beclin-1, labeled with red. (The human cell nucleus is shown in blue.) The influenza A virus causes seasonal epidemics nearly every winter in the United States. Although biologists know the virus depends on the human cell defense and restoration machinery known as autophagy to complete its life cycle, there is still much to be learned about the role individual proteins play in this process.

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To better understand autophagy in influenza A virus replication, a team of scientists from Los Alamos' Biosecurity and Public Health group are taking a closer look at the role of Beclin-1, one of the key protein players in this intricate game of cellular life and death. The first three images each show an individual fluorescent channel. In the fourth (bottom right) image, an overlay of the three channels, protein interaction appears orange where the colors for each protein (green and red) blend.

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